

D1  
130. It will also be understood that seat 128 will be covered with an amount of foam or similar padding-type material and that the amount of that foam will vary from seat to seat. When the rider 126 sits upon the seat 128, his weight will cause the foam to compress and he will sink into the seat 128. Preferably, the seating position 130 is determined after this compression has occurred.

✓  
Page 14, replace the paragraph at lines 11-15 with the following new paragraph:

D2  
As shown in FIG. 4, when rider 126 turns steering device 132 to its maximum positions, the handlebars sweep out a handlebar space 176. Because steering device 132 is positioned forward of the center of gravity of the vehicle 144, handlebar space 176 cannot intersect with the space occupied by rider 126. In other words, rider 126 will not normally hit his knees 148 with steering device 132 while riding snowmobile 110.

See the attached Appendix for the changes made to effect the above paragraph

IN THE CLAIMS:

✓  
Please cancel claim 76 without prejudice or disclaimer.

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Please amend claims 1, 6, 10, 16, 20, 26, 30, 36, 40, 44-46, 55, 58-61, 64, 73, 77, 81, and 82 as follows:

- D3
1. (Thrice Amended) A snowmobile, comprising:
    - a frame;
    - an engine disposed on the frame;
    - a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile;
    - two skis disposed on the frame;

a straddle seat disposed on the frame behind the engine, the seat being dimensioned to support a standard rider with a center of gravity in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; and

D<sup>3</sup> a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile,

wherein the snowmobile has a first center of gravity without the rider and a second center of gravity with the rider in the standard position, and

wherein a distance between a vertical line passing through the first center of gravity and a vertical line passing through the second center of gravity is between 0 cm and 14 cm.

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6. (Thrice Amended) A snowmobile, comprising:

a frame;

an engine disposed on the frame;

D<sup>4</sup> a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile;

two skis disposed on the frame;

a straddle seat disposed on the frame behind the engine, the seat being dimensioned to support a standard rider with a center of gravity in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; and

a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile,

D4 wherein the snowmobile has a first center of gravity without the rider and a second center of gravity with the rider in the standard position, and

wherein a line passing through the first center of gravity of the snowmobile and the second center of gravity forms an angle with horizontal that is between 35 and 90°.

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10. (Thrice Amended) A snowmobile, comprising:

a frame;

an engine disposed on the frame;

D5 a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile;

a forward-most drive track axle disposed on the frame;

two skis disposed on the frame;

a straddle seat disposed on the frame behind the engine, the seat being dimensioned to support a standard rider with a center of gravity in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male;

a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile; and

wherein a distance between a vertical line passing through the forward-most drive track axle and a vertical line passing through the center of gravity of the rider in the standard position is between 15 and 65 cm.

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D4 16. (Thrice Amended) A snowmobile, comprising:

a frame;

an engine disposed on the frame;

a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile;

a forward-most drive track axle disposed on the frame;

two skis disposed on the frame;

a straddle seat disposed on the frame behind the engine, the seat being dimensioned to support a standard rider having a center of gravity in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male;

a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile; and

wherein a line passing through the forward-most drive track axle and the center of gravity of the rider in the standard position forms an angle with horizontal that is between 41 and 75°.

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20. (Thrice Amended) A snowmobile, comprising:

a frame;

an engine disposed on the frame;

a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile;

two skis disposed on the frame;

a straddle seat disposed on the frame behind the engine, the seat being dimensioned to support suitable for a standard rider with a center of gravity in a standard position in which

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the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; and  
a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile,  
wherein the snowmobile has a center of gravity without the rider, and  
wherein a distance between a vertical line passing through the center of gravity of the snowmobile without the rider and a vertical line passing through the center of gravity of the rider in the standard position is between 5 and 55 cm.

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26. (Thrice Amended) A snowmobile, comprising:  
a frame;  
an engine disposed on the frame;  
a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile;  
two skis disposed on the frame;  
a straddle seat disposed on the frame behind the engine, the seat being dimensioned to support a standard rider having a center of gravity in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; and  
a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile,  
wherein the snowmobile has a center of gravity without the rider, and

D8

D<sup>9</sup> wherein a line passing through the center of gravity of the snowmobile without the rider and the center of gravity of the rider in the standard position forms an angle with horizontal that is between 39 and 79°.

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30. (Twice Amended) A snowmobile, comprising:

a frame;

an engine disposed on the frame;

a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile;

D<sup>9</sup> two skis disposed on the frame;

a straddle seat disposed on the frame behind the engine, the seat being dimensioned to support a standard rider with a center of gravity in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; and

a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile,

wherein the snowmobile has a center of gravity with the rider, and

wherein a distance between a vertical line passing through the center of gravity of the snowmobile with the rider and a vertical line passing through the center of gravity of the rider in the standard position is between 0 and 50 cm.

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D<sup>10</sup> 36. (Thrice Amended) A snowmobile, comprising:

a frame;

an engine disposed on the frame;

a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile;

two skis disposed on the frame;

a straddle seat disposed on the frame behind the engine, the seat being dimensioned to support a standard rider having a center of gravity in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; and

a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile,

wherein the snowmobile has a center of gravity with the rider, and

wherein a line passing through the center of gravity of the snowmobile with the rider in the standard position and the center of gravity of the rider in the standard position forms an angle with horizontal that is between 35 and 84°.

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40. (Four Times Amended) A snowmobile, comprising:

a frame;

a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male;

an engine disposed on the frame in front of the seat;

a steering device disposed on the frame and spaced forward of the seat such that, when the rider grasps the steering device in the standard position, the rider's torso is tilted toward

the steering device and the rider's arms extend toward the steering device with the rider's elbows substantially over the rider's feet;

two skis disposed on the frame and operatively connected to the steering device for steering the snowmobile; and

a footrest disposed below each side of the seat, each said footrest being dimensioned with respect to the seat and the steering device to support the rider's foot thereon,

011 wherein, for the standard rider in the standard position, the seat defines a seat position, the steering device defines a steering position, and the footrests define a footrest position,

wherein a line passing through the seat position and the steering position forms angle  $\alpha$  with a line passing through the seat position and the footrest position;

wherein a line passing through the footrest position and the steering position forms angle  $\beta$  with the line passing through the footrest position and the seat position,

wherein the line passing through the footrest position and the steering position forms angle  $\gamma$  with the line passing through the steering position and the seat position, and

wherein angle  $\alpha$  is between 63 and 152°, angle  $\beta$  is between 16 and 84°, and angle  $\gamma$  is between 11 and 42°.

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012 44. (Four Times Amended) A snowmobile, comprising:

a frame;

a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male;

an engine disposed on the frame in front of the seat;



a steering device disposed on the frame and spaced forward of the seat such that, when the rider grasps the steering device in the standard position, the rider's torso is tilted toward the steering device and the rider's arms extend toward the steering device with the rider's elbows substantially over the rider's feet;

two skis disposed on the frame and operatively connected to the steering device for steering the snowmobile; and

a footrest disposed below each side of the seat, each said footrest being dimensioned and configured with respect to the seat and the steering device to support the rider's foot thereon;

wherein, for the standard rider in the standard position, the seat defines a seat position, the steering device defines a steering position, and the footrests define a footrest position,

wherein a line passing through the seat position and the steering position forms angle  $\alpha$  with a line passing through the seat position and the footrest position;

wherein a line passing through the footrest position and the steering position forms angle  $\beta$  with the line passing through the footrest position and the seat position,

wherein the line passing through the footrest position and the steering position forms angle  $\gamma$  with the line passing through the steering position and the seat position,

wherein angle  $\alpha$ , angle  $\beta$ , and angle  $\gamma$  satisfy the relationship  $\alpha \geq \beta \geq \gamma$ ; and

wherein a distance between vertical lines passing through the steering position and the seat position is between 40-90 cm.

45. (Four Times Amended) A snowmobile, comprising:

a frame;

a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male;

an engine disposed on the frame in front of the seat;

a steering device disposed on the frame and spaced forward of the seat such that, when the rider grasps the steering device in the standard position, the rider's torso is tilted toward the steering device and the rider's arms extend toward the steering device with the rider's elbows substantially over the rider's feet;

*D12*  
two skis disposed on the frame and operatively connected to the steering device for steering the snowmobile; and

a footrest disposed below each side of the seat, each said footrest being dimensioned and configured with respect to the seat and the steering device to support the rider's foot thereon;

wherein, for the standard rider in the standard position, the seat defines a seat position, the steering device defines a steering position, and the footrests define a footrest position,

wherein a line passing through the seat position and the steering position forms angle  $\alpha$  with a line passing through the seat position and the footrest position;

wherein a line passing through the footrest position and the steering position forms angle  $\gamma$  with the line passing through the steering position and the seat position, and

wherein  $\alpha \approx 2.5\gamma$ .

46. (Four Times Amended) A snowmobile, comprising:

a frame;

a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat and the rider's thighs are substantially parallel to ground while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male;

an engine disposed on the frame in front of the seat;

D12  
a steering device disposed on the frame and spaced forward of the seat such that, when the rider grasps the steering device in the standard position, the standard rider's torso is tilted toward the steering device and the rider's arms extend toward the steering device with the rider's elbows substantially over the rider's feet; and

two skis disposed on the frame and operatively connected to the steering device for steering the snowmobile;

wherein the seat defines a seat position and the steering device defines a steering position for the standard rider in the standard position, and

wherein a line passing through the steering position and the seat position forms an angle  $\phi$  with horizontal that is between 15 and 51°.

55. (Thrice Amended) A snowmobile, comprising:

D13  
a frame;

a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male;

an engine disposed on the frame in front of the seat;

a steering device disposed forward of the seat;

two skis disposed on the frame and operatively connected to the steering shaft for steering the snowmobile; and

a windshield disposed forward of the steering device, the windshield having a top;

wherein the seat defines a seat position and the steering device defines a steering position for the standard rider in the standard position, and

wherein a line between the steering position and the seat position forms an angle  $\mu$  with a line between the seat position and the top of the windshield that lies between  $10^\circ$  and  $20^\circ$ .

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58. (Thrice Amended) A snowmobile, comprising:

a frame;

a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male;

an engine disposed on the frame in front of the seat;

a steering device disposed forward of the seat;

two skis disposed on the frame and operatively connected to the steering device for steering the snowmobile; and

a windshield disposed forward of the seat, the windshield having a top;

wherein, when in motion, the windshield defines a laminar flow region of moving air that extends upwardly and rearwardly from the top thereof, and

wherein, when seated in the seat and when grasping the steering device in the standard position, the rider's head is positioned within the laminar flow region.

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3578  
3 to 14

(Thrice Amended) A snowmobile, comprising:

a frame including a pair of footrests;

a straddle seat disposed on the frame;

an engine disposed on the frame in front of the seat;

two skis disposed on the frame;

a forward-most drive track axle disposed on the frame forward of the pair of footrests;

and

a steering device disposed on the frame forward of the forward-most drive track axle,

the steering device being operatively connected to the two skis for steering the snowmobile.

60. (Thrice Amended) A snowmobile, comprising:

a frame having a forward-most drive track axle disposed thereon;

a straddle seat disposed on the frame;

an engine disposed on the frame in front of the seat;

two skis disposed on the frame; and

a steering device disposed on the frame and operatively connected to the two skis for steering the snowmobile;

wherein the snowmobile has a center of gravity without a rider and the steering device is disposed on the frame forward of the center of gravity, and wherein the forward-most axle is positioned forward of the center of gravity.

61. (Thrice Amended) A snowmobile, comprising:

a frame having a forward-most drive axle mounted thereon;

a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male;

an engine disposed on the frame in front of the seat;

two skis disposed on the frame; and

a steering device disposed on the frame and operatively connected to the two skis for steering the snowmobile;

wherein the snowmobile has a center of gravity with a rider in the standard position and the steering device and the forward-most drive axle are disposed on the frame forward of the center of gravity.

64. (Thrice Amended) A snowmobile, comprising:

a frame;

a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard seat position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male;

an engine disposed on the frame in front of the seat;

two skis disposed on the frame; and

D15  
a steering device disposed on the frame and forward of the seat defining a steering position for the standard rider in the standard seat position, the steering device being operatively connected to the two skis for steering the snowmobile,

wherein a distance between vertical lines passing through the steering position and the standard seat position is between 40 and 90 cm.

73. ~~(Thrice Amended) A snowmobile, comprising:~~

a frame;

a straddle seat disposed on the frame;

an engine disposed on the frame in front of the seat;

D16  
two skis disposed on the frame;

a steering device disposed on the frame and operatively connected to the two skis for steering the snowmobile; and

right and left sideboards extending laterally from the frame below the seat on either side thereof, each of the sideboards having a forward portion suitable for placement of a rider's foot thereon, the forward portion of each sideboard disposed at an angle  $\Delta$  with horizontal that is  $-5^\circ$ ; and

right and left toe-holds disposed respectively above the rider's toes in a vertical plane for allowing the rider to releasably secure himself to the snowmobile.

D17  
77. (Thrice Amended) A snowmobile, comprising:

a frame;

a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the

snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male;

an engine disposed on the frame in front of the seat;

a drive track operatively coupled to the engine, the drive track including a belt entrained about at least two axles, including a forward-most axle;

two skis disposed on the frame;

a steering device disposed on the frame forward of the seat and operatively connected to the two skis for steering the snowmobile; and

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right and left sideboards extending laterally from the frame below the seat on either side thereof, each of the sideboards having a forward portion suitable for placement of a rider's foot thereon,

wherein, for the standard rider in the standard position, the seat defines a seat position, the steering device defines a steering position forward of the forward-most axle of the drive track, and the forward portions of the sideboards define a footrest position,

wherein a line passing through the seat position and the steering position forms angle  $\alpha$  with a line passing through the seat position and the footrest position;

wherein a line passing through the footrest position and the steering position forms angle  $\beta$  with the line passing through the footrest position and the seat position,

wherein the line passing through the footrest position and the steering position forms angle  $\gamma$  with the line passing through the steering position and the seat position, and

wherein angle  $\alpha$  is between 63 and 152°, angle  $\beta$  is between 16 and 84°, and angle  $\gamma$  is between 11 and 42°.

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81. (Four Times Amended) A snowmobile, comprising:

a frame;

a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male;

an engine disposed on the frame in front of the seat;

two skis disposed on the frame;

D18  
a steering device operatively connected to the two skis, the steering device being spaced forward of the seat such that, when the rider grasps the steering device in the standard position, the standard rider's torso is tilted toward the steering device and the rider's arms extend toward the steering device with the rider's elbows substantially over the rider's feet; and

a sideboard extending laterally from the frame below each side of the seat, each said sideboard having a forward portion dimensional and configured with respect to the seat and the steering device to support a rider's foot thereon,

wherein, for the standard rider in the standard position, the seat defines a seat position, the steering device defines a steering position, and the forward portion of each said sideboard defines a footrest position,

wherein a line passing through the seat position and the steering position forms angle  $\alpha$  with a line passing through the seat position and the footrest position;

wherein a line passing through the footrest position and the steering position forms angle  $\beta$  with the line passing through the footrest position and the seat position,

wherein the line passing through the footrest position and the steering position forms angle  $\gamma$  with the line passing through the steering position and the seat position, and

wherein angle  $\alpha$ , angle  $\beta$ , and angle  $\gamma$  satisfy the relationship  $\alpha \geq \beta \geq \gamma$ .

82. (Four Times Amended) A snowmobile, comprising:

a frame;

a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male;

an engine disposed on the frame in front of the seat;

two skis disposed on the frame;

a steering device operatively connected to the two skis, the steering device being spaced forward of the seat such that, when the rider grasps the steering device in the standard position, the standard rider's torso is slightly tilted toward the steering device and the rider's arms extend toward the steering device with the rider's elbows substantially over the rider's feet; and

a sideboard extending laterally from each side of the frame below the seat, each said sideboard having a forward portion dimensioned and configured with respect to the seat and the steering device to support a rider's foot thereon,

wherein, for the standard rider in the standard position, the seat defines a seat position, the steering device defines a steering position, and the forward portions of the sideboards define a footrest position,

wherein a line passing through the seat position and the steering position forms angle  $\alpha$  with a line passing through the seat position and the footrest position;

wherein a line passing through the footrest position and the steering position forms angle  $\gamma$  with the line passing through the steering position and the seat position, and

wherein  $\alpha \approx 2.5\gamma$ .

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See the attached Appendix for the changes made to effect the above claims.

Please accept the proposed drawing changes which are highlighted on the attached Request for Approval of Drawing Corrections for Figs. 4 and 20.